Claims.

1. A method for the discovery or testing of active substances, which influence the growth and survival of nerve cells, wherein a cell is brought into contact with at least one active substance, wheerein subsequently, within said cell, the mRNA of the ß-actin or the ß-actin protein alone or together with the SMN protein and/or a ribonucleic protein hnRNP, in particular the ribonucleic protein hnRNP-R and/or hnRNP-Q, are determined, for instance in growth zones of neurites, wherein the determined amounts of said components are compared to the amounts of said components in a cell, which has not been brought into contact with the prospective active substance, and in case of an increased amount the active substance is selected.

2. A method according to claim 1, wherein one, several, or all components are detected and optionally quantitatively determined with antibodies or antibody fragments.

3. A method according to claim 1 or 2, wherein β-actin is detected and optionally quantitatively determined with actin-binding substances.

4. A method according to one of claims 1 to 3, wherein one, several, or all components are detected and optionally quantitatively determined by measurement of their mRNA.

5. A method according to one of claims 1 to 4, wherein the cell is a nerve cell.

6. A method according to one of claims 1 to 4, wherein the cell has a mesodermal or endodermal origin.

7. A test system for carrying-out a method according to one of claims 1 to 6, comprising a cell, cells of a cell line or a tissue sample containing cells, means for cultivating the cells, and means for qualitatively or quantitatively determining one, several, or all components.

8. The use of a test system according to claim 7 for the discovery of active substances, which promote the growth and survival of nerve cells and/or which promote the growth of neurites and axons.

9. The use of a test system according to claim 7 for testing the growth and survival of nerve cells, in particular for the diagnosis and/or control of the course of neurodegenerative diseases and/or nerve damages by injuries or poisoning.

10. An active substance obtainable with a method according to one of claims 1 to 6, wherein said active substance increases in a cell the amount of complexes containing the com-

ponents ribonucleic proteins, in particular hnRNP-R and/or hnRNP-Q, SMN and β-actin mRNA.

11. The use of an active substance according to claim 10 for preparing a pharmaceutical composition for promoting the growth and the survival of nerve cells, in particular for the prophylaxis or therapy of neurodegenerative diseases and/or nerve damages by injuries or poisoning.